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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP01/03488

A. CLASSIFICATION OF SUBJECT MATTER  
Int.Cl<sup>7</sup> H01L33/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl<sup>7</sup> H01L33/00, H01S5/00-5/50Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
Jitsuyo Shinan Koho 1965-1996 Jitsuyo Shinan Toroku Koho 1996-2001  
Kokai Jitsuyo Shinan Koho 1971-2001 Toroku Jitsuyo Shinan Koho 1994-2001

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 5-315651 A (Rohm Co., Ltd.), 26 November, 1993 (26.11.93), Par. No. 0012, (esp., line 39) (Family: none)	1,2
Y	JP 9-36435 A (Rohm Co., Ltd.), 07 February, 1997 (07.02.97), Par. No. 0029 (Family: none)	3,8,9
Y	CD-ROM of the specification and drawings annexed to the request of Japanese Utility Model Application No.90895/1991 (Laid-open No.36857/1993), (Stanley Electric Co., Ltd.), 18 May, 1993 (18.05.93), Par. No. 0013 (Family: none)	4-7,10-13
Y	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No.109204/1990 (Laid-open No.65465/1992), (Citizen Denshi K.K.), 08 June, 1992 (08.06.92), Fig. 4 (Family: none)	3,8,9
Y		3,8,9

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search:  
12 July, 2001 (12.07.01)Date of mailing of the international search report  
24 July, 2001 (24.07.01)Name and mailing address of the ISA/  
Japanese Patent Office

Authorized officer

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## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 9-314589 A (Bridgestone Corporation), 09 December, 1997 (09.12.97), Par. Nos. 0011, 0019 (Family: none)	8, 9
Y	JP 10-76546 A (Nitto Boseki Co., Ltd.), 24 March, 1998 (24.03.98), Par. No. 0009 (Family: none)	8, 9
A	JP 7-86455 A (Toshiba Corporation), 31 March, 1995 (31.03.95), Par. No. 0018; Fig. 2 (Family: none)	4-7
A	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No.123178/1980 (Laid-open No.47059/1982), (Hitachi, Ltd.), 16 March, 1982 (16.03.82), Fig. 2 (Family: none)	10-13
A	CD-ROM of the specification and drawings annexed to the request of Japanese Utility Model Application No.37631/1992 (Laid-open No.90967/1993), (Stanley Electric Co., Ltd.), 10 December, 1993 (10.12.93), Fig. 1 (Family: none)	10-13